In The Main
Special TNC Issue – Summer 2005

getting your system in shape this summer

Douglas.Paine@state.ma.us

Do you own a business or other facility regulated by Massachusetts Department of Environmental Protection (MassDEP) as a public water system? Here are a few tips that will help you meet state requirements and help assure that you are serving your customers the best quality water possible.

DO contact your regional MassDEP office if you have sold or closed your business, or if you have changed operators, so that MassDEP can maintain an accurate record of your facility.

DON'T expand or renovate your facility without first contacting your regional MassDEP office to confirm that your plans will not jeopardize your well's water quality.

DO make sure all paper work is complete and submitted on time. This includes annual statistical reports, water sample results, sanitary surveys, and cross connection forms.

DO be sure to follow proper start-up and shutdown procedures if you are a seasonal facility.

DON'T collect your monthly or quarterly water quality compliance samples on the last available day. Samples should be collected as early as possible in case a sample gets lost or breaks. Assure that MassDEP receives your results on time. Samples collected early also gives you time to collect confirmation samples should the original sample indicate contamination.

DO be sure to contact MassDEP and your licensed water operator if the laboratory notifies you that your routine bacteria sample is positive. Ensure that all the necessary follow-up actions are followed properly.

DON'T wait until the end of the year to read your water meter. Take readings at least each month as a way of troubleshooting for unaccounted water loss.

DO keep a record of where pipes and valves are located, and a listing (with dates) of any repaired or replaced equipment.

DO reduce the risk of contamination from back siphonage by installing hose bib vacuum breakers on all threaded outside hose connections.

DON'T locate hose connections or outdoor faucets immediately adjacent to electrical outlets if you own a campground or recreational facility. Water and electricity don't mix!

DO work with your regional MassDEP office to replace problem sources.

DO make sure you know what is your well's Zone I recharge area. Zone I is an area, measured as a radius from your well, within which MassDEP expects you to eliminate or reduce all potential sources of contamination.

DO protect your well by relocating fuel storage tanks and eliminating parking from the recharge area.

DON'T use commercial septic tank cleaners if you have a septic system and don't apply pesticides, herbicides, or fertilizers in the recharge area.

DO eliminate the contamination risk of wells located in pits by installing pitless adaptors, raising the wellhead, and backfilling. ITM

water quality reports

Marie.Tennant-DEP@state.ma.us

Transient Non-Community (TNC) water systems must post an annual water quality report commonly called a consumer confidence report or CCR. MassDEP makes these reports from the sampling data that the systems have sent in throughout the year and mails the reports out to each TNC system. MassDEP is now in the process of making out these reports. You should receive your system's report before this newsletter reaches you. Call 617-292-5885 if you have not yet received yours.

Federal regulations require community water systems to prepare and distribute a CCR to each customer. This report educates the consumers about their water supply and allows them to make decisions about their health and water consumption. MassDEP requires TNC systems to post their ready-made reports in a conspicuous area so that consumers can read about the water quality in any of the 931 TNC systems in the state that they may visit.

The reports contain a general statement about the source of drinking water, contaminants commonly found in drinking water, definitions of terms used in the report, a table displaying all detects for the 2004 calendar year, and educational language for any maximum contaminant level (MCL) violations. It may also contain a public notification if one had been required. Your report also doubles as a Certificate of Registration. This ensures your consumers that your facility is registered with the Commonwealth as a transient non-community water system and is in compliance with applicable state regulations.

Your report is required to be continually posted in a conspicuous location and reposted each year with the new report MassDEP mails you. Conspicuous locations can be in bathrooms, by registration desks, near cash registers, or water fountains. It is a good idea to keep the original in your files and post a copy in clear protective plastic.

Visit http://www.mass.gov/dep/brp/dws/dwspubs.htm for more information on drinking water, or call the Drinking Water Program at 617-292-5770, email at Program.Director-DWP@state.ma.us or call the federal EPA drinking water hotline at 800-426-4791. ITM

a message from the board of directors

Paul.Niman@state.ma.us

Transient Non-community Water Systems (TNCs) are public water systems and must comply with the staffing requirements contained in 310 CMR 22.11B. Since being a public water system is secondary to the nature of their business, TNCs are not always aware of how to go about becoming a certified operator or how to get the training contact hours (TCHs) needed to maintain their certification. The following questions and answers are meant to assist TNCs understand these issues.

What is the classification of my system?
All TNCs are classified as Very Small Systems (VSS) regardless of the population served. TNCs providing treatment, except for disinfection, also receive a treatment classification that reflects the complexity of their treatment processes. TNCs using only disinfection do not need to rate the disinfection process. If you have any questions about the classification of your system, please contact your regional MassDEP office.

What are the staffing requirements?
TNCs must have a primary operator with a license equal to the classification of the system. In most cases this is a VSS license. The primary operator must also hold a treatment license if the system has a treatment classification. A secondary operator is not needed for a TNC. However, the system must retain a qualified licensed operator for times when the primary operator is absent (i.e. absences not exceeding 30 days).

How can I become a certified operator?
The Board of Certification of Operators of Drinking Water Supply Facilities (the Board) issues licenses to applicants that meet requirements contained in 236 CMR 1.00-5.00. All applicants must pass an

examination that corresponds to the grade and type of certification for which they apply and must meet the education and experience requirements. In order to qualify for a VSS certificate, an applicant must pass the VSS examination and demonstrate that they have a high school diploma and six months acceptable experience operating a very small system. If the applicant does not have the required six months experience, they will be issued an operator-in-training (OIT) certificate. The holder of an OIT certificate may apply to be upgraded to full status when they have the required experience. For more information, please visit the Board's website at: http://www.mass.gov/dpl/boards/dw/index.htm .

How do I get training?
Certificates issued by the Board expire on December 31st of odd numbered years and may be renewed upon payment of a renewal fee. All operators must demonstrate to the Board that they have completed the required TCHs in the previous two years. VSS operators must complete a minimum of 5 TCHs and Grade 1 or 2 operators must complete a minimum of 10 TCHs. An operator holding more than one certificate must meet the requirements for the highest certificate. Organizations such as New England Water Works Association and Massachusetts Rural Water Association offer training throughout the year. In addition, a list of approved training can be found on the Board's website at:
http://www.mass.gov/dpl/boards/dw/conedu/dw_tch.htm .

Can I hire an operator instead of becoming an operator?
Yes, there are many Massachusetts certified operators that provide contract services to TNCs. You may get a list of these operators by contacting your regional MassDEP office or visiting the following website http://www.mass.gov/dep/brp/dws/certop.htm and clicking on the Certified Operator Directory document. If you choose to hire a contract operator you will find the following tips useful.

• Always have a current written contract that clearly describes the services required. Check the MassDEP Certified Operator Compliance Handbook for more information on typical duties of a contract certified operator. This compliance handbook is included in the MassDEP TNC guide.

• Have the certified operator report in writing each month that all required items have been completed.

• If your system receives a warning or enforcement action (e.g. NON) from the MassDEP, re-evaluate your contract with your hired operator.

• You are responsible for your system regardless of your hiring of a certified operator. You must make sure that the operator is doing all required work. ITM

save money with meters and some mysteries of the SDWA assessment explained

Donovan.Bowley@state.ma.us

Install master meters and save money! That's right! There are two areas where many unmetered systems - particularly small systems - can save money. The first of these relates to the requirement in the Drinking Water Regulations (310 CMR 22.04(6). There, it says, "By no later than December 31, 2001, all public water systems shall install meter(s) at location(s) sufficient to record each system's production of water from all sources, including water purchased from and/or water sold to other public water systems." When a public water system, whatever its size, has not yet installed master meters, the Department must issue a Notice of Noncompliance.

Lack of master meters that record water produced from all your sources can also cost you money in "lost water"; that is, water for which you have paid money to pump or purchase, but which never entirely reaches its intended users because the distribution pipes spring a leak someplace. One notable such experience of lost water involved a summer camp that MassDEP staff discovered to be using many times the amount of water as similar camps. We told the owner, and when she inspected the system, she found a major leak in the distribution line as it crossed under a stream. Massive amounts of her water were augmenting the stream-flow and not serving her camp, but no break was apparent on first examination due to the underwater location.

For systems that have long supply pipes, seasonal use and are shut down over winter, an ideal arrangement to monitor for supply pipe leaks is to have meters at the source(s) and point(s) of use. Comparison of "water in" versus "water out" totals can tell you if your distribution system has developed leaks.

Another way you may be able to save money with master meters is on your annual SDWA Assessment fee. If your system does not report master meters in the base year for a particular assessment, a "fee in lieu of assessment" is charged, based on population. This is a flat fee based on the average water use in a range of populations, and is set near the middle of the range. If you can report gallonage from the master meter(s), your assessment rate is very likely to drop, even to as low as the base fee of $10.00. Particular categories of PWS where this may happen are restaurants, nonresidential schools, and campgrounds.

Speaking of the Assessment: MassDEP staff hears some recurring questions each year. The first of these is, "I own my well. Why is my [store - motel - restaurant - camp - etc.] a public water system?" The answer is that your establishment is a public water system because your business serves drinking water or water used in food preparation and serving food to the public, and falls within the nationwide criteria that define a public water system.

The second question is "Why is my assessment invoice based on three-year-old data?" The legislation requires MassDEP to set the rate "before October first" of each fiscal year, "for the following fiscal year."

In practice, then, when the Assessment Advisory Committee reviews information each September, the most recent data available on which to recommend the rate for the next fiscal year are the annual statistics. These are furnished by public water systems in the previous January or February for the calendar year just past. Each calendar year is numbered for the year in which it begins. The legislature was concerned that systems have enough time to budget and raise money for each upcoming assessment bill, so they asked MassDEP to set each annual rate for billing in the next fiscal year. The Massachusetts governmental fiscal year ends each June 30, and is numbered for the year in which it ends.

In real time, what that means is that every September the Advisory Committee and MassDEP confer and the rate is set for the year that begins the following July. MassDEP issues bills in the December following that July - an elapsed time of 24 months from data report to bill. Of that two years, 15 months are time for you, as a public water supplier, to be aware of and to set aside funds to pay the assessment.

That apparent time gap also is what MassDEP staff means when they tell you that the bill is issued based on a "trailing base year." ITM

operator training reimbursement program for very small systems

Kirsten King of NEWWA

Is your service population less than 3,300? If so, then you may qualify for the Operator Training Reimbursement Program. Managed by the Massachusetts Coalition for Small System Assistance (MCSSA), this new program provides reimbursement to small public water systems (serving less than 3,300) for the cost of attending a 1-day or two 1/2-day seminars. In addition, the program provides

reimbursement for taking the Very Small Systems Certification Exam ($277.00). Go to www.mass.gov/dep/brp/dws/certop.htm for the reimbursement application.

The MCSSA was formed to deliver a full range of direct, outreach-based services to small public water systems, including assistance with building the skills needed to supply safe drinking water that meets water quality regulations. The MCSSA is a unique coalition of five service providers with diverse and extensive expertise. Subject areas are related to the financial, managerial, and technical elements of operating small water systems, as well as fostering small water system affiliation with the drinking water profession.

The MCSSA's services are free to small public water system personnel. For more information about the coalition, visit www.masmallwatersystem.org. For more information about the reimbursement program, contact Kirsten King at the New England Water Works Association at (508) 893-7979 or kking@newwa.org. ITM

improving compliance

Yvette.DePeiza@state.ma.us

The Department of Environmental Protection (MassDEP) has seen a steady and significant increase in the number of transient non-community water systems (TNC) that understand the routine monitoring and reporting requirements. This is a significant achievement. These TNCs are staying clear of violations and penalties and have taken the provision of water as an important function of their business.

These results are a reflection of the TNCs, MassDEP, and other water organizations partnering and working well together. So before you get into hot water... ask for assistance! See inset on page 8 where to get assistance. The majority of TNCs have taken the following actions:

~Hired or became a certified operator

~Collected and had their Massachusetts certified laboratories analyze their drinking water samples as required

~Filed Annual Statistical reports on time

~Developed and filed a cross connection control plan

~Posted their Annual Water Quality Report provided by MassDEP

~Paid the Annual Safe Drinking Water Act Assessment

The MassDEP has also instituted several programs that have helped TNCs to improve. These programs included the following:

~Training/compliance assistance - This was initially via MassDEP circuit riders and after 2002 via the Massachusetts Coalition for Small System Assistance

~Enforcement priority for TNCs lacking certified operators

~Partnership with Massachusetts Department of Public Health to initiate the suspension of local Board of Health (BOH) license for recalcitrant TNC facilities with BOH permits

With the focus on training, enforcement, and ensuring that all TNCs have an operator, many TNCs have become more professional in how they deal with the drinking water requirements.

Even though MassDEP is pleased with the progress TNCs have made, there is still constant work that needs to be done. TNCs continue to have high rates of ownership changes that result in periods of lag-time when new owners are learning about the drinking water requirements. In addition, each year MassDEP has

identified more than 50 unregistered TNCs that are operating without MassDEP approval. We have stepped up enforcement in this area to make sure that when a consumer enters a TNC they can be assured that the facility is registered with MassDEP and is monitoring the quality of the water. We are encouraging certified operators to keep us informed whenever they are aware of changes in ownership. We are also working with local permitting authorities to identify and refer all public water systems to MassDEP for approval. If you know of any facilities that meet the definition of a TNC but are not registered with the Department encourage them to contact the local MassDEP office for approval.

Western Regional Office in Springfield 413-755-2281
Central Regional Office in Worcester 508-792-7650
Southeast Regional Office in Lakeville 508-946-2760
Northeast Regional Office in Boston 617-654-6500 ITM

what is a public water system?

As defined by Massachusetts Drinking Water Regulations 310 CMR 22.00, a public water system (PWS) has 15 or more service connections or regularly serves at least 25 people 60 or more days a year. A system that serves water 60 or more days a year is considered to regularly serve water. A PWS can be publicly or privately owned. PWSs are subdivided by regulation into two major categories: community and non-community. This division is based on the type of consumer served and the frequency the consumer uses the water. Basically, a community (COM) system serves water to a residential population. The non-community category is further broken down into two categories: non-transient non-community (NTNC) water systems such as schools, factories, industrial parks, and offices and transient non-community (TNC) water systems such as restaurants, rest stops, motels, golf courses, and parks.

Follow this chart as an easy way to determine PWS status.

Public Water System
A system that pipes water for human consumption if such system has at least 15 service connections or regularly serves at least 25 individuals 60 or more days out of the year.

Community Water System
A public water system that pipes water for human consumption to at least 15 service connections used by year-round residents, or one that regularly serves at least 25 year-round residents (e.g., municipality, subdivision, mobile home park).

Non-Community Water System
A public water system that pipes water for human consumption to at least 15 service connections used by individuals other than year-round residents for at least 60 days a year, or serves 25 or more people at least 60 days a year (e.g., schools, factories, rest stops, Interstate carrier conveyances).

Non-Transient Non-Community Water System (NTNC)
A non-community water system that serves at least 25 of the same persons over six months per year (e.g., schools, factories, industrial parks, office buildings).

Transient Non-Community Water System (TNC)
A non-community water system that does not meet the definition of a non-transient non-community water system (e.g., highway rest stops, restaurants, motels, golf courses, parks).

what is a pws id number?

When you register as a PWS, Mass DEP gives your system a 7-digit identification number. There are 3 elements to the number that are informative and make a unique number for every PWS in the Commonwealth.

The first digit will be either a 1, 2, 3, or 4. This represents the region in which the PWS is located.

The next 3 digits represent the town in which the PWS is located. Every town in the state has a three-digit number assigned to it.

The last 3 digits represent the individual PWS in that particular town and are given sequentially. ITM

cross-connection control for TNC systems

Otavio.Paula-Santos@state.ma.us

The Massachusetts Cross-connection Control Program (CCCP) regulations, 310 CMR 22.22, require that all PWSs, including the TNC systems, have a program plan approved by MassDEP and be fully implemented by January 1, 1999. In order to facilitate the implementation of a CCCP for TNC systems, the MassDEP developed a questionnaire that must be completed and submitted to MassDEP for its review and approval. One of the most important aspects of a good TNC CCCP is the cross-connection survey to find out all the actual and potential cross-connections and eliminate them or properly protect them. Your cross-connection survey must be conducted by a Massachusetts-certified cross-connection surveyor as required by the CCCP regulations.

What must I do on my property to eliminate or protect against cross-connections?
There are several simple actions and devices that you can use to accomplish backflow prevention and/or eliminate potential cross-connections that are commonly found in our homes and work places.

Atmospheric Vacuum Breakers must be installed on all threaded hose connections.
These devices simply screw onto the hose bib (faucet) and provide a second threaded connection for the hose. Many local hardware stores stock these devices that can be purchased and easily installed by the property owner. Be sure the atmospheric vacuum breaker you buy has an ASSE 1011 designation or at least an UL approval.

Drain hoses and piping must be installed with an air gap between the end of the hose/piping and the discharge point.
Make sure the end of the drain hose or pipe is **at least** 1" above the top of the sink or basin it discharges into. Residential automatic washers may have internal protection ahead of the discharge hose. Check the equipment instructions or contact your plumber.

Handheld showers and pullout faucets.
Kitchen sink faucets with pullout spouts should have at least an atmospheric vacuum breaker to protect against back-siphonage. Similarly, handheld showers should be installed with an in-line backflow preventer with an ASSE 1014 designation.

Water faucets for sinks and tubs must be installed with an air gap between the top rim of the sink or tub and the faucet.
Older fixtures may have faucets located below the top rim of sink or tub. If the water level rises over the faucet contaminated water can back-siphon into the public system if pressure is lost.

Water tanks on toilets must include a ball cock valve that creates a vacuum break to prevent backflow.
Be sure the ball cock valve you buy has at least an ASSE 1002 designation.

Hot water heating systems must include proper backflow protection for the water line feeding the boiler.
Contact your plumber or your local plumbing inspector's office to assure that the backflow preventer is adequate for your system. ITM

updates to the tnc guidebook

Marie.Tennant-DEP@state.ma.us

As an owner or operator of a TNC, it is your responsibility to meet federal and state drinking water standards and provide high quality drinking water for your customers. To help you in this endeavor MassDEP, in 1998, mailed all TNC systems a white 3-ring binder containing the publication, *TNC - Managing Your TNC Drinking Water System.* MassDEP is now in the process of updating this guide.

This guide contains important information, in layman's terms, on complying with Massachusetts Drinking Water Regulations, 310 CMR 22.00. Including information on initial and routine testing, treatment devices, sample reporting forms, and a directory assistance page. You will be sent updates to this guide in early fall.

Be sure to update your binder/guide and keep it nearby for daily use. MassDEP encourages you to use this guide to keep your system in compliance.

The 1998 guide (2005 updates will be on-line in the fall) is available on-line at http://www.mass.gov/dep/brp/dws/tnc.htm. The MassDEP regulations are found on-line at http://www.mass.gov/dep/brp/dws/regs.htm. ITM

preparing for a sanitary survey

Yvette.DePeiza@state.ma.us

TNC owners and their certified operators should keep their drinking water facilities in good working order. Routinely MassDEP staff or partners will come out and inspect the facility. MassDEP performs planned inspections or sanitary surveys of TNCs every 10 years but facilities are encouraged to regularly inspect their facility by performing their own sanitary survey.

Sanitary surveys are a key component to protecting drinking water from contamination. Many deficiencies commonly found during a survey are often the result of poor housekeeping or maintenance. This possible route of contamination can be easily eliminated with simple improvements in housekeeping and maintenance practices.

Here are some housekeeping tips to help TNCs keep their facilities in tip-top shape as well as prepare for a sanitary survey:

- Well vents or other holes in the well casing should have pest screening
- Storage tank vents and overflows should have pest screening or flap valves
- Damaged screens and flap valves should be replaced
- Old piping and tanks should be eliminated (not just "valved off")
- Use proper flushing and disinfection techniques after construction or repairs
- Choose wise locations for sampling taps
- Have good sanitary conditions around the water source
- Correct all deficiencies that were noted on the last survey
- Make sure there is a watertight cap on wells that are developed as pitless adapters

- Install water meter at the source
- Make sure fences and other security structures are not damaged
- Do not allow unauthorized access to drinking water facility components
- Make sure that all cross connections are protected

For more information on how to keep your drinking water facility in the best condition possible, please contact your regional MassDEP office. ITM

Need free advice with a drinking water issue? Got Questions? Need training?

Contact the MCSSA
Massachusetts Coalition for Small System Assistance
800-556-3792 x324 or 800-488-1969 x232
http://www.masmallwatersystem.org/contact.html